

**IN THE CLAIMS**

A list of the pending claims is presented below.

1. (Previously Presented) A method comprising:

receiving order information based on an order of a customer; and determining an offer for the customer based on:  
a round-up amount and  
at least one of  
a genetic program and  
a genetic algorithm; and  
outputting an indication of the determined offer.

2-5. (Cancelled).

6. (Previously Presented) A device, comprising:

a processor; and  
a storage device coupled to the processor and storing instructions adapted to be executed by said processor to:  
receive order information based on an order of a customer;  
determine an offer for the customer based on:  
a round-up amount and  
at least one of  
a genetic program and  
a genetic algorithm; and  
output an indication of the determined offer.

7. (Previously Presented) A medium storing instructions adapted to be executed by a processor to:

receive order information based on an order of a customer;

determine an offer for the customer based on:

a round-up amount and

at least one of

a genetic program and

a genetic algorithm; and

output an indication of the determined offer.

8. (Cancelled).

9. (Previously Presented) A method comprising:

receiving order information based on an order of a customer;

determining a transaction total based on the order information;

calculating a difference between the transaction total and a next highest dollar amount greater than the transaction total; and

determining an offer for the customer based on:

the difference and

at least one of

a genetic program and

a genetic algorithm and

outputting an indication of the determined offer.

10. (Cancelled).

11. (Previously Presented) The method of claim 9, further comprising:

determining an amount of sales tax associated with the transaction; and

in which determining the offer for the customer is further based on the amount of sales tax.

12. (Previously Presented) The method of claim 1, further comprising:  
displaying the offer on a display.
13. (Previously Presented) The method of claim 1, further comprising:  
determining a transaction total based on the order information;  
providing the offer to the customer;  
receiving an indication of acceptance of the offer;  
generating new order information representing at least one additional product  
being added to the order information; and  
determining a new transaction total based on the new order information and  
outputting an indication of the new transaction total, in which outputting an  
indication of the offer comprises:  
providing the offer to the customer.
14. (Previously Presented) The method of claim 1,in which determining an offer for the  
customer is further based on: historical offer criteria.
15. (Previously Presented) The method of claim 1, further comprising:  
generating a plurality of genetic programs, in which each genetic program is  
given an opportunity to generate at least one respective offer.
16. (Previously Presented) The method of claim 15, further comprising:  
selecting at least one of the plurality of genetic programs at random to generate a  
respective offer.
17. (Previously Presented) The method of claim 1, further comprising:  
generating a base set of rules based on historical order information;  
creating new rules based on:  
the base set of rules, and  
additional historical information; and  
optimizing the new rules based on experience from orders.

18. (Previously Presented) The method of claim 1, in which determining the offer comprises:

determining a respective score for each of a plurality of potential offers.

19. (Previously Presented) The method of claim 1, further comprising:

determining a first plurality of genetic programs;

determining a respective fitness of each genetic program of the plurality of genetic programs; and

determining a second plurality of genetic programs based on the first plurality of genetic programs and its respective fitness.

20. (Previously Presented) The method of claim 19, in which determining the second plurality of genetic programs comprises:

modifying at least one genetic program of the first plurality of genetic programs.

21. (Previously Presented) The method of claim 19, in which determining the second plurality of genetic programs comprises:

generating at least one new genetic program using a crossover process.

22. (Previously Presented) The method of claim 19, in which determining the second plurality of genetic programs comprises:

generating at least one new genetic program using a replication process.

23. (Previously Presented) The method of claim 19, in which determining the second plurality of genetic programs comprises:

generating at least one new genetic program using a mutation process.

24. (Previously Presented) The method of claim 1, in which the customer is at a retail store; and

further comprising:

in which outputting an indication of the offer comprises:  
displaying the offer to the customer via a display at the retail store.

25. (Previously Presented) The method of claim 18, in which the retail store comprises a quick service restaurant.

26. (Previously Presented) The method of claim 18, in which the offer comprises an offer for at least one food item.

27. (Previously Presented) A method of using at least one of a genetic program or a genetic algorithm in generating an offer, the method comprising:  
receiving order information based on an order of a customer;  
translating the order information to a bit stream; and  
generating an offer for the customer based on at least one of a genetic program or a genetic algorithm, in which the at least one of a genetic program or a genetic algorithm comprises:

matching the bit stream to one or more classifiers of a population of classifiers, each classifier of the population of classifiers comprising a condition and an action to perform if the condition is met;

determining one or more expected rewards for each matching classifier; and

selecting a given classifier to make the offer, the given classifier comprising a given action; and  
outputting the generated offer.

28. (Previously Presented) The method as recited in claim 27, further comprising:  
determining that a minimum number of classifiers of the population of classifiers has not been matched;  
generating one or more additional classifiers; and

adding the additional classifiers to the population of classifiers, in response to determining that the minimum number of classifiers has not been matched.

29. (Previously Presented) The method as recited in claim 28, in which said additional classifiers are generated through at least one of crossovers of existing classifiers or mutations of existing classifiers.

30. (Previously Presented) The method as recited in claim 27, further comprising determining whether to perform an exploit operation or an explore operation in selecting a classifier to make an offer.

31. (Previously Presented) The method as recited in claim 30, in which in response to determining that an explore operation is to be performed, the given classifier is selected at random.

32. (Previously Presented) The method as recited in claim 30, in which in response to determining that an exploit operation is to be performed, the given classifier is associated with an expected reward of maximized profit.

33. (Previously Presented) The method as recited in claim 27, in which the bit stream and each classifier of the population of classifiers is a uniform length.

34. (Previously Presented) A method for using a self activating offer generation system, the method comprising:

initializing an offer generation system, the offer generation system comprising at least one of a genetic algorithm or a genetic program to generate offers; establishing a threshold criteria for activation of the offer generation system; running the offer generation system as a background process in a given environment, whereby the offer generation system is trained to make offers in the given environment; and

the offer generation system automatically self activating, in response to detecting the threshold criteria is met.

35. (Previously Presented) A method for applying a trained offer generation system, the method comprising:

- applying an offer generation system within a first environment;
- training the offer generation system within the first environment to create a trained offer generation system which is optimized for use in the first environment;
- adapting and applying the trained offer generation system to an identified second environment.